

CLAIMS

What is claimed is:

1. A method for connecting a client to a database managed by a network of computer systems, the network including a plurality of database management system (DBMS) members, the method comprising the steps of:

a) providing a shared network address for the plurality of DBMS members; and

b) utilizing the shared network address by the client to connect to an active DBMS member of the plurality of DBMS members.

2. The method of claim 1, wherein the shared network address is common to each DBMS member of the plurality of DBMS members.

3. The method of claim 1, wherein the utilizing step (b) further includes the steps of:

(b1) submitting a domain name for the database location to a domain name server coupled to the client;

(b2) resolving the domain name to the shared network address; and

(b3) returning the shared network address to the client from the domain name server.

4. The method of claim 1, wherein the utilizing step (b) further includes the step of:

(b1) sending the shared network address by the client to a network router coupled to the network of computer systems.

5. The method of claim 1, wherein the utilizing step (b) further includes the step of:

(b1) determining which ones of the plurality of DBMS members located at the shared network address are active.

6. The method of claim 5, wherein the determining step (b1) further includes:

(b1i) communicating with a work load manager coupled to the plurality of DBMS members, wherein the work load manager monitors the status and workload of each active DBMS member.

5 7. The method of claim 5, wherein the utilizing step (b) further includes the step of:

(b2) connecting the client to any one of the active DBMS members located at the shared network address.

8. The method of claim 5 further comprising the step of:

(c) transmitting to the client a list of active DBMS members from an active DBMS member.

9. The method of claim 5 further comprising the steps of:

(c) providing a weighted load for each active DBMS member; and

(d) identifying a member-specific network address associated with each active DBMS member.

15 10. The method of claim 9 further comprising the step of:

(e) balancing a workload across the active DBMS members based on their respective weighted loads.

11. The method of claim 1 further comprising the step of:

20 (c) assigning each DBMS member in the plurality of DBMS members a corresponding member-specific network address, wherein the member-specific network address is associated with the corresponding member regardless of its location.

12. The method of claim 11 further comprising the step of:

(d) utilizing the member-specific network address of a DBMS member to re-

establish a connection to the DBMS member for performing a resynchronization process after a first connection to the DBMS member has been interrupted.

13. A computer readable medium containing programming instructions for connecting a client to a database managed by a network of computer systems, the network including a plurality of database management system (DBMS) members, comprising the programming instructions for:

- a) providing a shared network address for the plurality of DBMS members; and
- b) utilizing the shared network address by the client to connect to an active DBMS member of the plurality of DBMS members.

14. The computer readable medium of claim 13, wherein the shared network address is common to each DBMS member of the plurality of DBMS members.

15. The computer readable medium of claim 13, wherein the utilizing instruction (b) further includes the instructions for:

- (b1) submitting a domain name for the database location to a domain name server coupled to the client;
- (b2) resolving the domain name to the shared network address; and
- (b3) returning the shared network address to the client from the domain name server.

16. The computer readable medium of claim 13, wherein the utilizing instruction (b) further includes the instruction for:

- (b1) sending the shared network address by the client to a network router coupled to the network of computer systems.

17. The computer readable medium of claim 13, wherein the utilizing instruction (b)

further includes the instruction for:

(b1) determining which ones of the plurality of DBMS members located at the shared network address are active.

5 18. The computer readable medium of claim 17, wherein the determining instruction (b1) further includes:

(b1i) communicating with a work load manager coupled to the plurality of DBMS members, wherein the work load manager monitors the status and workload of each active DBMS member.

10 19. The computer readable medium of claim 17, wherein the utilizing instruction (b) further includes the instructions for:

(b2) connecting the client to any one of the active DBMS members located at the shared network address.

20. The computer readable medium of claim 17 further comprising the instruction for:

15 (c) transmitting to the client a list of active DBMS members from an active DBMS member.

21. The computer readable medium of claim 17 further comprising the instructions for:

(c) providing a weighted load for each active DBMS member; and

(d) identifying the member-specific network address associated with each active DBMS member.

20 22. The computer readable medium of claim 21 further comprising the instruction for:

(e) balancing a workload across the active DBMS members based on their respective weighted loads.

23. The computer readable medium of claim 13 further comprising the instruction for:

(c) assigning each DBMS member in the plurality of DBMS members a corresponding member-specific network address, wherein the member-specific network address is associated with the corresponding member regardless of its location.

24. The computer readable medium of claim 23 further comprising the instruction for:

(d) utilizing the member-specific network address of a DBMS member to re-establish a connection to the DBMS member for performing a resynchronization process after a first connection to the DBMS member has been interrupted.

25. A system for connecting a client to a database managed by a network of computer systems, the network including a plurality of database management system (DBMS) members, the system comprising:

a shared network address for the plurality of DBMS members; and
a network router coupled to the client for utilizing the shared network address to connect the client to an active DBMS member of the plurality of DBMS members.

26. The system of claim 25, wherein the shared network address is common to each DBMS member of the plurality of DBMS members.

27. The system of claim 25 further comprising:

a domain name server coupled to the client, wherein the client submits a domain name for the network of computer systems to the domain name server and the domain name server resolves the domain name to the shared network address and returns the shared network address to the client.

28. The system of claim 25, wherein the network router comprises means for determining which ones of the plurality of DBMS members located at the shared network address are active.

29. The system of claim 28, wherein the determining means includes a work load manager coupled to the plurality of DBMS members, wherein the work load manager monitors the status and workload of each active DBMS member and communicates the status to the network router.

5 30. The system of claim 28, wherein each active DBMS member further includes means for transmitting a list of active DBMS members to the client.

31. The system of claim 28 further comprising:
means for providing a weighted load for each active DBMS member; and
means for identifying a member-specific network address associated with each active
10 DBMS member.

32. The system of claim 31 further comprising:
means for distributing work evenly across the active DBMS members based on their respective weighed loads.

33. The system of claim 28 further comprising:
15 means for assigning a corresponding member-specific network address for each DBMS member, wherein the member-specific network address is associated with the corresponding member regardless of its location.

34. The system of claim 33, wherein the client utilizes the member-specific network address to perform a resynchronization process with a DBMS member after a first connection
20 with the DBMS member has been interrupted.